

2002 GYPSY MOTH SUPPRESSION PROJECT SUMMARY
at
Harpers Ferry National Historic Park,
C & O Canal National Historic Park-Great Falls Area
and
Catoctin Mountain Park



Report by:
Rodney L. Whiteman, Forester

Graphics by:
Karen Felton, Biologist

Forest Health Protection
USDA Forest Service
Morgantown, WV

Between April 26 and May 6, 2002, approximately 999 acres at three sites located within the National Capital Region of the USDI Park Service were aerially treated with the biological insecticide Gypchek to reduce gypsy moth populations and to prevent defoliation.

Approximately 298 acres at the Great Falls Area of the C&O Canal National Park were treated on April 26, 300 acres at Harpers Ferry National Historical Park were treated on April 29 and 401 acres at Catoctin Mountain Park were treated on May 6.

One rotary-winged aircraft equipped with a Differential Global Positioning System (DGPS) was used to apply the insecticide.

This report documents the spray equipment, insecticide, meteorological conditions, foliage and larval development, and spray coverage, and security measures for the project. Treatment efficacy will be reported once defoliation surveys are conducted in June and egg mass surveys are completed in the fall.

Aircraft and Spray Equipment

Contractor:	Agrotors, Inc.
Aircraft:	Bell 206
FAA Number:	206BY
Pilot:	Dan Riley
DGPS Brand:	SATLOC
Spray System:	Simplex
Nozzle Type:	AU 7000 Micronairs
Number of Nozzles:	6
Blade Angle:	35°
Spray Disk Orifice:	.151"
Application Rate:	128 ounces/acre
Boom Pressure:	18 psi
Air Speed:	75 mph
Swath Width:	90 feet
Flow Rate:	13.6 gpm (calculated) 13.5 gpm (actual)

Meteorological Conditions

Date	Site	Time	Temperature Range	RH Range	Wind Speed Range	Wind Direction
4/26	C&O Canal	0640-0808	38-47°	58-84%	1-2	NW, W
4/30	Harpers Ferry	0630-0824	43-51°	53-72%	1-4	SW
5/6	CMP	0630-0840	46-62°	67-89%	0-1	SW

A detailed report of weather conditions is enclosed in Appendix A

Foliage and Larval Development

Date	Site	Foliage Development		Larval Development
4/26	C&O Canal	red oak	80%	20% first instar
		white oak	50%	74% second instar
		chestnut oak	90%	6% third instar
4/30	Harpers Ferry	red oak	40%	43% first instar
		white oak	25%	57% second instar
		chestnut oak	40%	
5/6	Catoctin Mountain Park	red oak	65%	45% first instar
		white oak	65%	55% second instar
		chestnut oak	65%	

Spray Coverage

Based on observations made by personnel in the treatment blocks and by viewing the SATLOC printouts (Appendix B), spray coverage was good. Skips in the spray blocks were minimal and very little area outside of the treatment blocks was sprayed.

Narrative

The suppression project had 5 treatment blocks. The Great Falls Area of the C&O Canal National Park had one spray block (Figure 1) while both Harpers Ferry National Historical Park (Figure 2) and Catoctin Mountain Park (Figure 3) had two spray blocks.

The project commenced at the Great Falls Area of the C&O Canal National Park on the morning of April 26. Treatment at that site started at 0636 and was completed by 0810. Approximately 298 acres were treated.

At Harpers Ferry National Historical Park, rain was forecasted on April 27 and 28 so treatment was scheduled for April 29. However, wind in excess of 20 mph prevented treatment on that day. The two spray blocks at Harpers Ferry were finally treated on April 30 from 0627 to 0825. Approximately 300 acres were treated.

To allow for additional larval and foliage development, the treatment at Catoctin Mountain Park was targeted for May 3. However, wind in excess of 10 mph prevented treatment on that day. Due to a visitor at Camp David, treatment was not planned for May 4 and 5. On May 6, the two Catoctin Mountain Park spray blocks were treated from 0626 to 0841. Approximately 401 acres were treated.

A grand total of approximately 999 acres was sprayed at these three Park Service sites. The daily sortie reports are enclosed in Appendix C. No accidents or incidents occurred during the project. Treatment timing based on larval and foliage development was good at the Great Falls Area of the C&O Canal National Park and excellent at both Harpers Ferry National Historical

Park and Catoctin Mountain Park. Based on larval and foliage development, the treatment at the C&O National Park could have been conducted 2-3 days earlier.

Due to the terrorist attacks on 9/11/01, security measures were increased on this project. The most stringent measures were enacted at Catoctin Mountain Park since it is located adjacent to Camp David. These security measures are enclosed in Appendix D.

No problems were encountered with the spray equipment, ground support equipment and/or personnel provided by the contractor, Agrotors, Inc. The production rate of this project was 201 acres per hour and met the contract requirement of 200 acres per hour.

As stated previously, treatment efficacy will be evaluated through a defoliation survey conducted in June and an egg mass survey this fall. The suppression project will be considered successful if noticeable defoliation is prevented on less than 20 percent of the treatment area and residual gypsy moth populations are reduced below the treatment threshold on at least 80 percent of the treatment area.

Figure 1.-- 2002 gypsy moth treatment area at C & O Canal National Historic Park-- Great Falls Area.

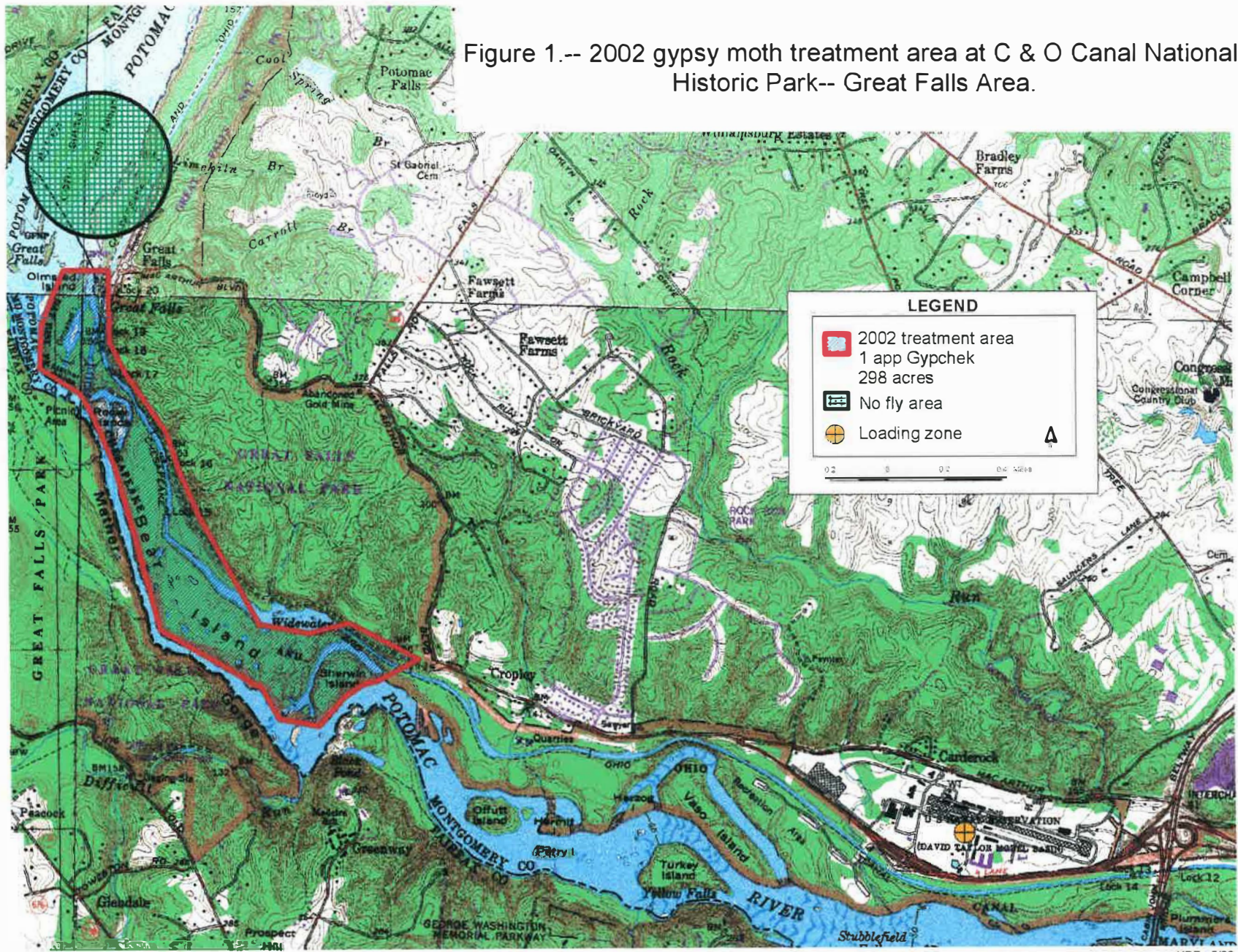
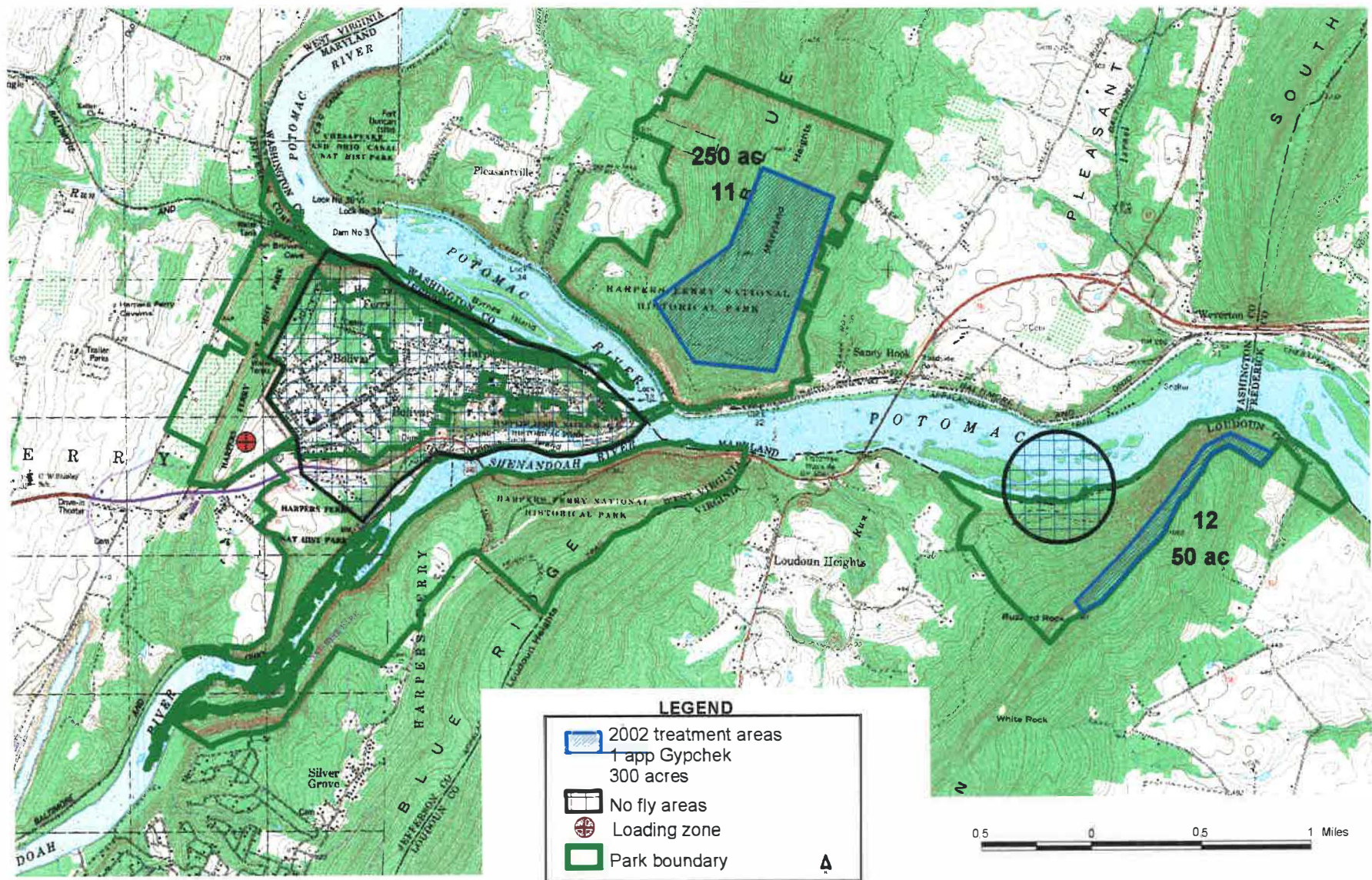


Figure 2.-- 2002 gypsy moth treatment areas at Harpers Ferry National Historic Park.



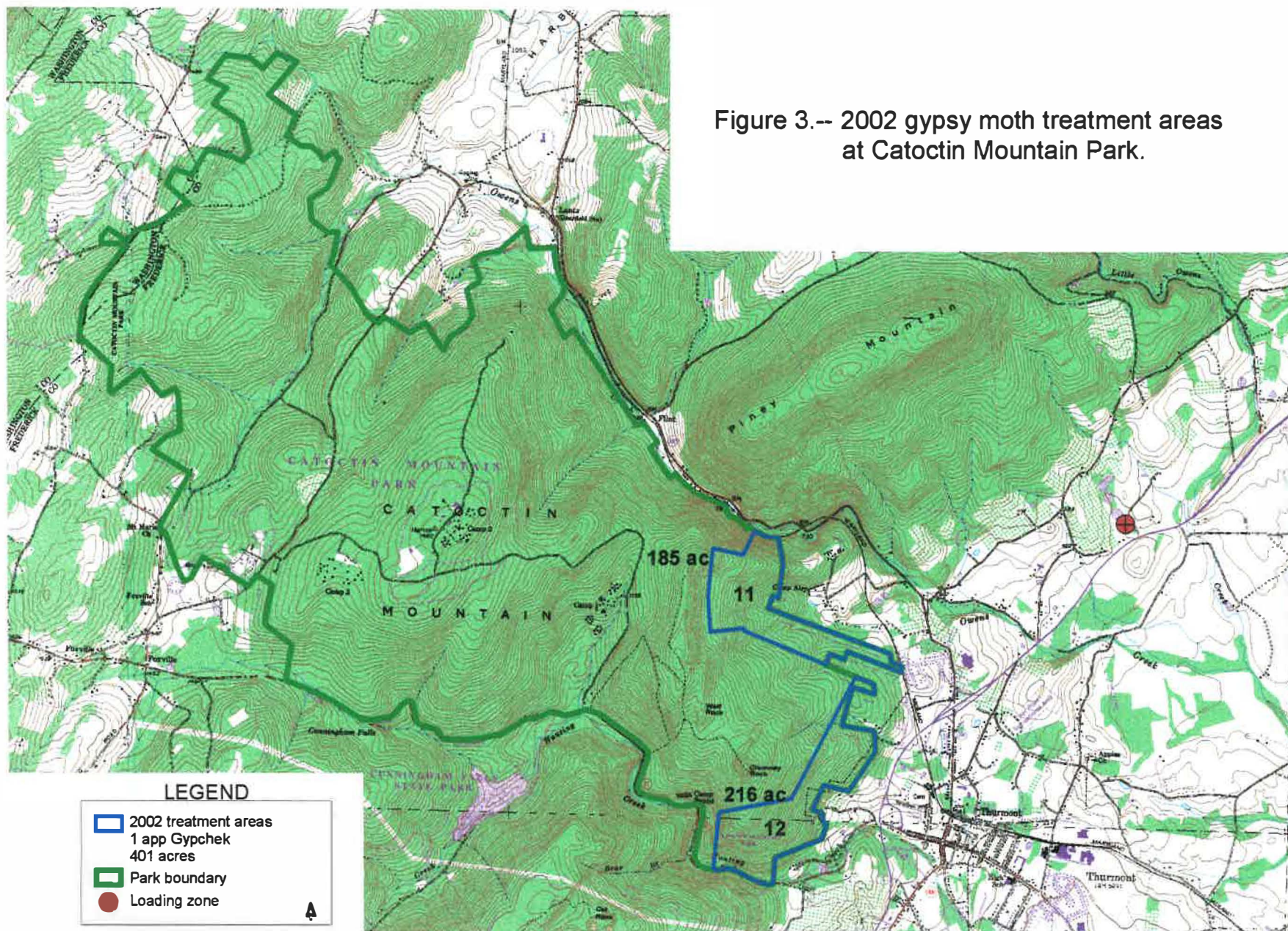


Figure 3.-- 2002 gypsy moth treatment areas at Catoctin Mountain Park.

APPENDIX A

METEROLOGICAL CONDITIONS

DURING TREATMENT

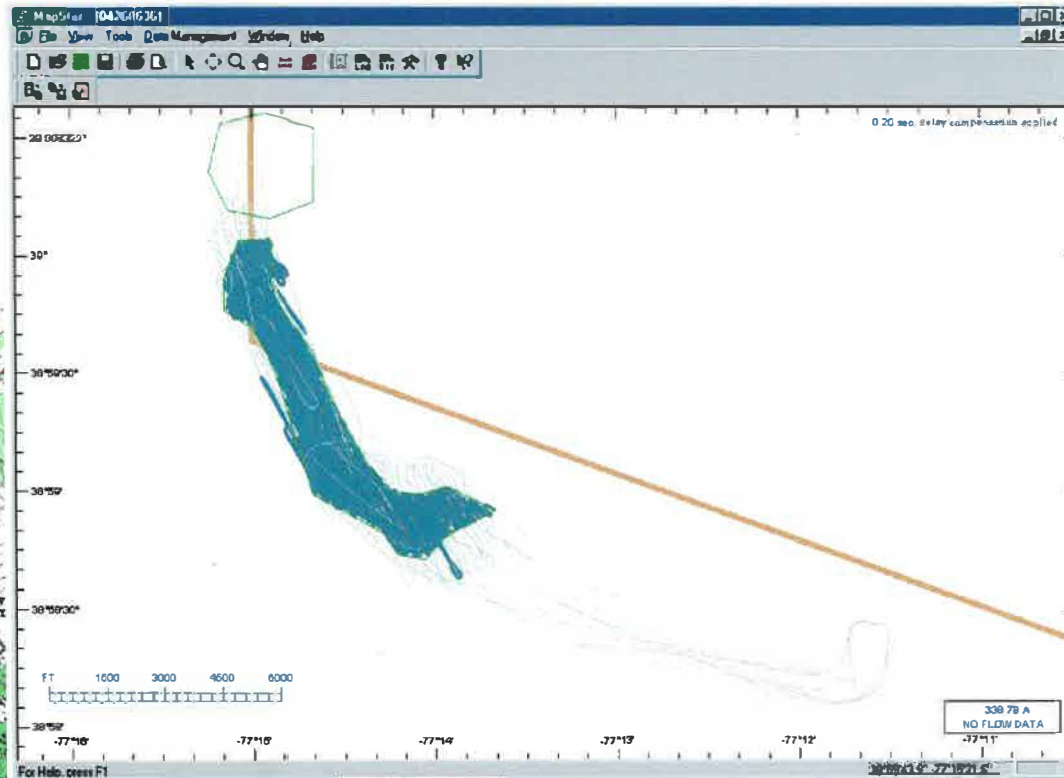
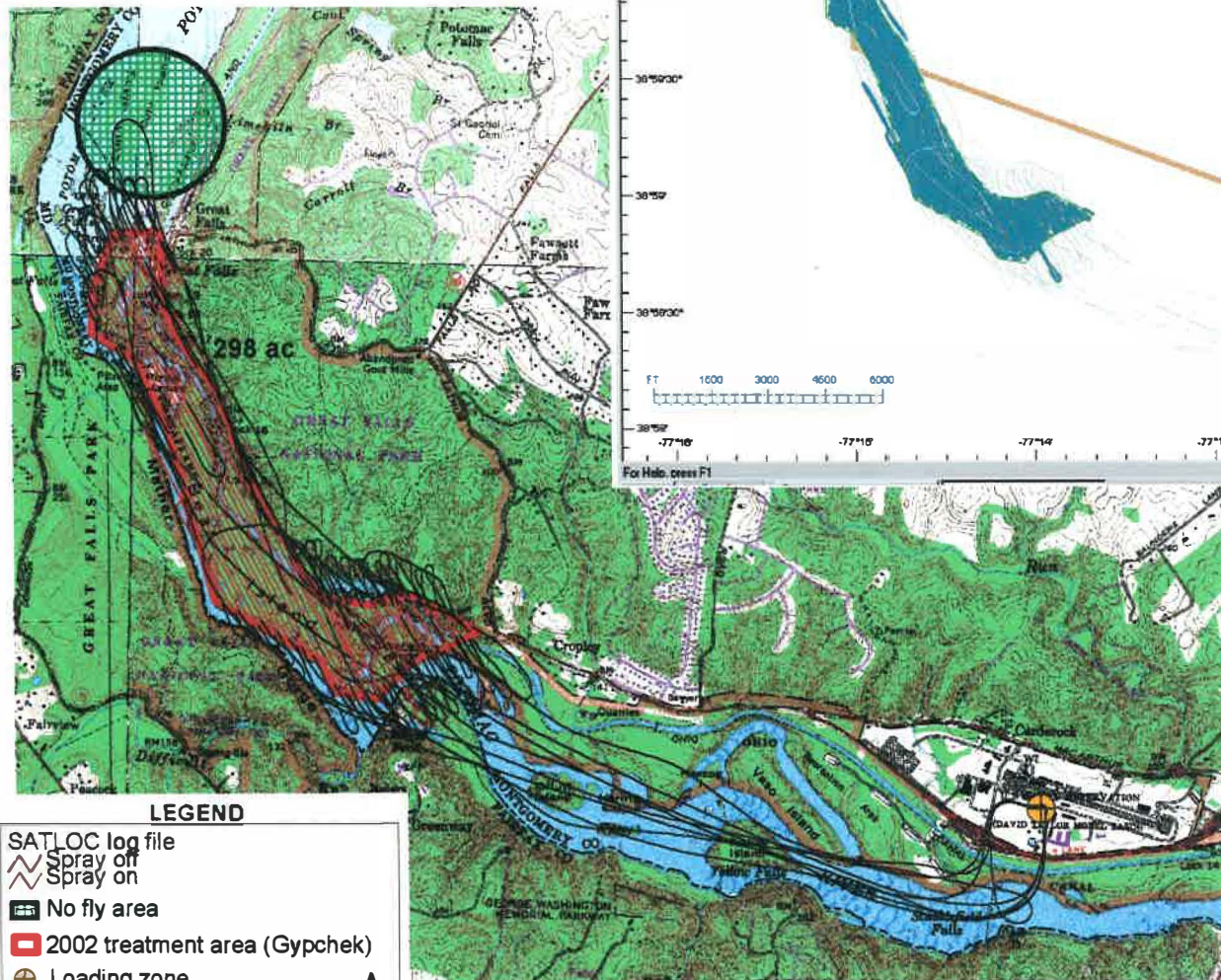
Meteorological Conditions During Treatment

Site	Date	Time	Temperature (F)	RH	Wind Speed (mph)	Wind Direction
C&O Canal	4/26	0640	38°	84%	1	NW
		0702	42°	76%	1-2	NW
		0719	44°	70%	1	NW
		0746	46°	60%	1	NW
		0808	47°	58%	1-2	W
Harpers Ferry	4/30	0630	43°	72%	2	SW
		0703	44°	70%	2-4	SW
		0728	46°	63%	2	SW
		0752	49°	61%	2-3	SW
		0807	49°	61%	1-2	SW
		0824	51°	53%	1-2	SW
Catoctin Mountain Park	5/6	0630	46°	89%	0	—
		0655	51°	85%	0	—
		0735	53°	82%	0	—
		0759	56°	75%	0	—
		0826	57°	72%	0	—
		0840	62°	67%	1	SW

APPENDIX B

SATLOC PRINTOUTS

Figure 1. -- Gypsy Moth Suppression Project at C & O Canal National Historic Park, Great Falls Area, April 26, 2002.



SATLOC log file

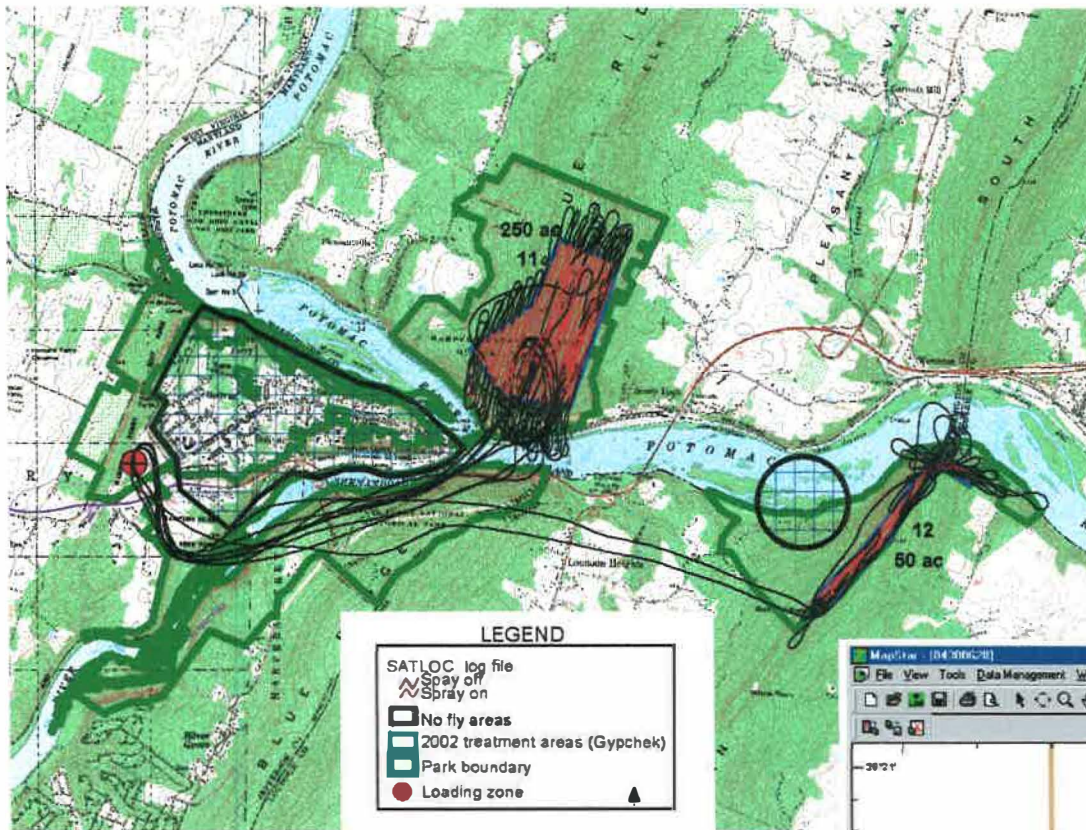


Figure 2.— Gypsy Moth Suppression Project
at Harpers Ferry National Historic Park,
April 30, 2002.

SATLOC log file

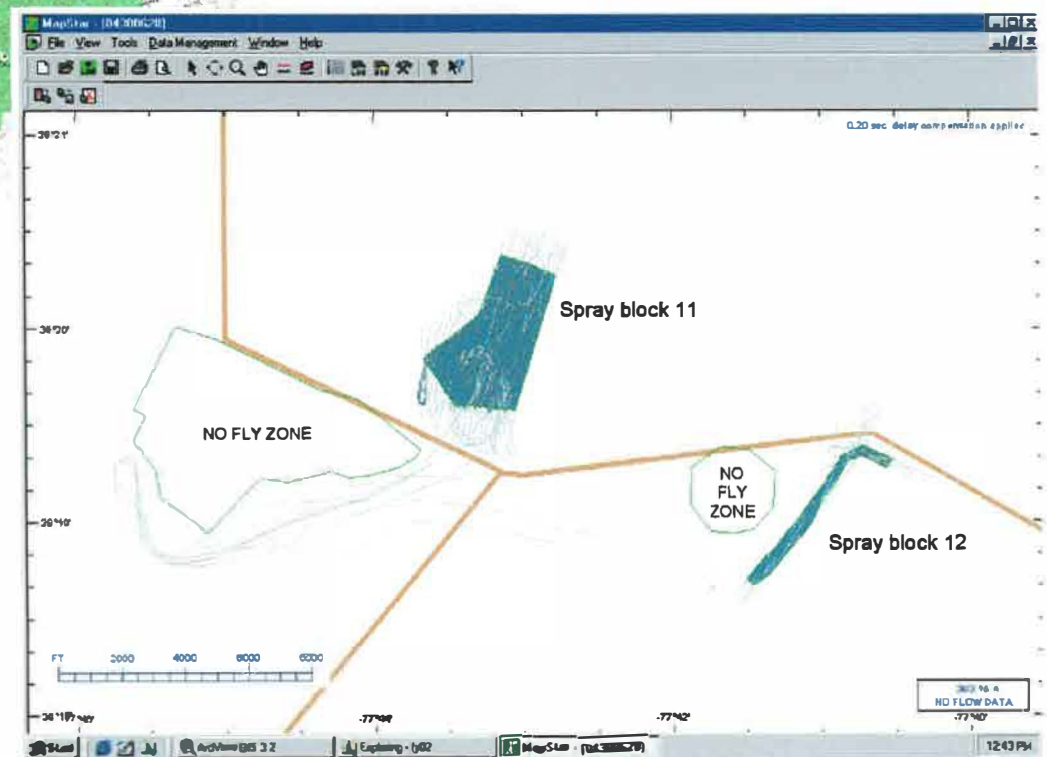
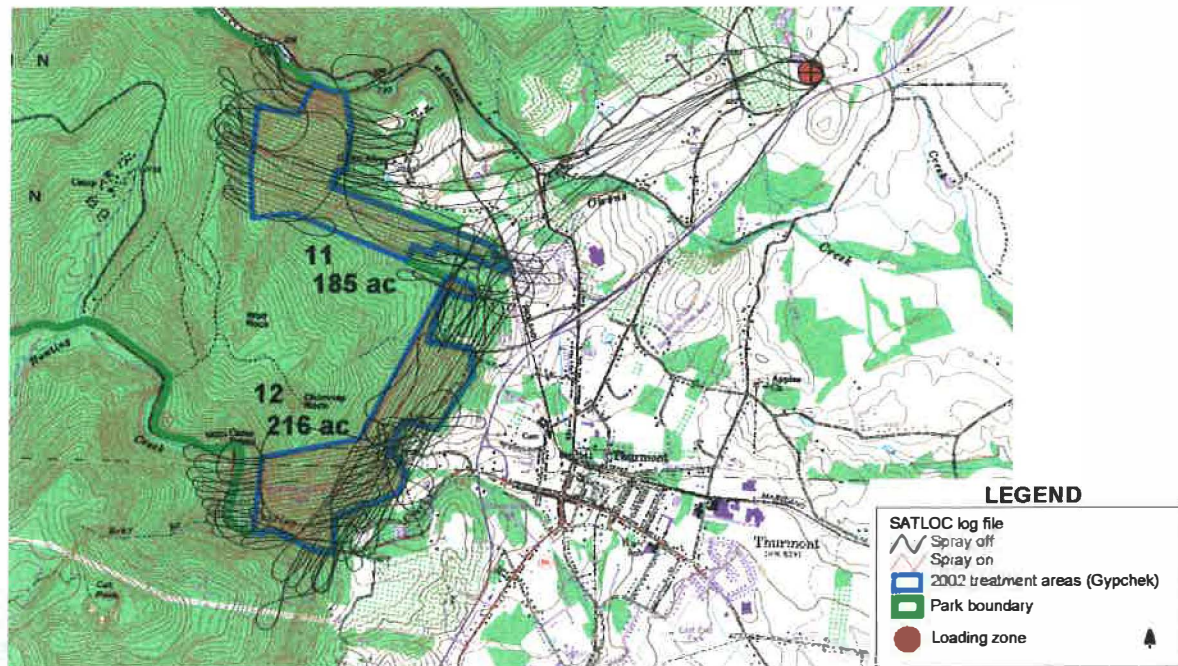
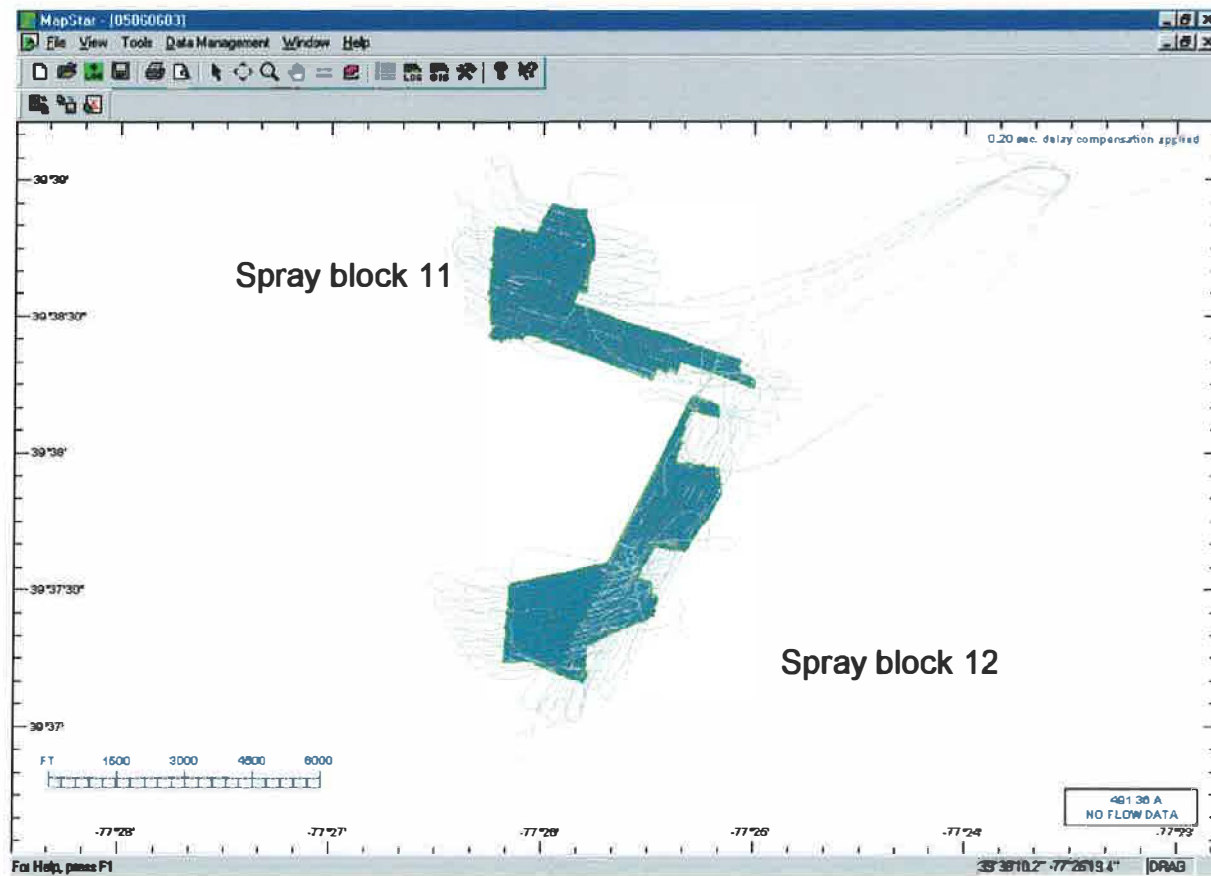


Figure 3.-- Gypsy moth suppression project at Catoctin Mountain Park, May 6, 2002.



SATLOC log file



APPENDIX C

DAILY SORTIE REPORTS

DAILY SORTIE REPORT

Project coordinator: Rod Whiteman

Date: 4/26/02

Location: Great Falls

Aircraft ID: N 204B Y

Pilot: Dan Riley

[illegible]

COMMENTS (Cause of delays, accidents, reason for shut-downs etc.)

Great Falls Complete

 $\approx 298 \text{ K}$

SIGNATURES

Project Coordinator: Kathryn L. Winkelman

Contractors Representative:

DAILY SORTIE REPORT

Project coordinator: Rod Whitehouse

Date: 4/30/02

Location: Harpers Ferry

Aircraft ID: N 206 BY

Pilot: Dan Riley

[illegible]

COMMENTS (Cause of delays, accidents, reason for shut-downs etc.)

Copy Party is completed

Total of 300 acres

SIGNATURES

Project Coordinator: *Gregory A. Intiman*

Contractors Representative:

DAILY SORTIE REPORT

Project coordinator: Rod Whiteman

Date: 5/6/02

Location: Cmr

Aircraft ID: N 206B-1

Pilot: Dan R. Lee

[illegible]

COMMENTS (Cause of delays, accidents, reason for shut-downs etc.)

Cmp complete

NPS Contract complete

SIGNATURES

Project Coordinator: *Kedney to D. Lubman*

Contractors Representative:

APPENDIX D
SECURITY MEASURES
at
CATOCTIN MOUNTAIN
PARK

Security measures for gypsy moth spraying at Catoctin Mountain Park in 2002

Spray material water – will be obtained and under control of USFS personnel
bond – will be in unopened 2 ½ gallon jugs, under control of USFS personnel
carrier – located in locked tank in mix truck, under control of Agrotors personnel
gypsy virus (Gypchek) – will be in unopened bags, under control of USFS personnel

Aircraft Bell 206B, N#206BY
Will be inspected upon arrival at loading zone for weapons, explosives, cameras, etc. All four entry points of aircraft's spray tanks have been locked when aircraft has not been in use. Spray system will be flushed with water prior to loading insecticide

Mix truck Will be inspected for weapons, cameras, explosives, etc. Tank with carrier will be inspected to verify that it is locked and mix tank will be inspected to verify it is empty. Mix tank will be flushed with water prior to mixing insecticide.

Pilot Will be Dan Riley, check ID to verify

Truck driver Will be Barry Phillips, check ID to verify

Communications Law enforcement will have AM radio to communicate with pilot when aircraft is airborne

Flight Tracking Will be accomplished by law enforcement at the loading zone and by personnel in or near the spray blocks.
Permanent flight records will be obtained through DGPS printout



United States
Department of
Agriculture

Forest
Service

Northeastern Area
State and Private Forestry

180 Canfield Street
Morgantown, WV 26505-3101

File Code: 3400

Date: May 10, 2002

Ms. Jil Swearingen
Center for Urban Ecology
USDI National Park Service
1100 Ohio Drive, SW 4598 MacArthur Blvd, NW
Washington, DC 20242 20007

Dear Jil:

Enclosed is the report that documents the gypsy moth suppression project at the Great Falls Area of the C&O Canal National Park, Harpers Ferry National Historical Park and Catoctin Mountain Park.

A total of approximately 999 acres were treated with Gypchek using a rotary wing aircraft from April 26 to May 6.

I would like to thank Susan, Bill, Jim, Becky, Roger, you, and all others who participated in the project. Your help was invaluable!

Treatment efficacy will be evaluated through defoliation surveys conducted in June and egg mass surveys conducted this fall.

If you have any questions concerning the suppression projects or report, please call me at 304-285-1555.

Sincerely,

RODNEY L. WHITEMAN
Forester
Morgantown Field Office

Enclosure

cc: Susan Alberts, C&O Canal
Bill Hebb, Harpers Ferry
James Voight, CMP
Noel Schneeberger, AO
Bernie Raimo, DFO
Mike Connor, SPFO

RLW/blm

